REMARKS

Response to Examiner's Arguments

The Examiner maintained his position that, in U.S. Pat. No. 5,410,344 to Graves et al. ("Graves"), "the 'Overall Feature Rating' as disclosed in Fig. 5 of the Graves patent is a parent preference object in a hierarchical data structure, since it is a single preference value (or parent preference object) characterizing user preference for the combination of the multiple description elements or child preference objects associated with a first preference object (or parent preference object) in a hierarchy." Office Action of April 7, 2006, at p. 3. The applicant respectfully disagrees.

In his arguments, the Examiner disregarded (even omitted from a quote) applicants' argument that Graves explicitly discloses that the "Overall Feature Rating" in FIG. 5 is an item in a "series of questions." *See* Graves at col. 6:60 to col. 7:4. The applicants submit that one skilled in the art understands that a "series of questions" is different from a "hierarchical data structure." The term "hierarchical data structure" refers to a structure of data having several levels arranged in a tree-like structure. *See, e.g.,* http://dictionary.com. Instead of a tree-like structure, the term "series" refers to "a number of things or events of the same class coming one after another in spatial or temporal succession." *See* http://www.m-w.com/dictionary/series.

Because Graves fails to disclose the claimed hierarchical data structure, the Examiner seems to construe a hierarchy based on the content of the series of questions in Graves. According to the Examiner, one of the questions is a "parent" of the other questions in the same series because its content corresponds to an "Overall Feature Rating." As the series of questions is not a hierarchical data structure by itself, the Examiner seems to argue that the content in the questions of Graves represents an abstract hierarchy.

The claims, however, do not recite an abstract hierarchy. The claims recite a hierarchical data structure, which is not a mere abstraction, but requires a particular

hierarchical organization of the data. ("More than mere abstraction, the data structures are specific electrical or structural elements in a memory." In re Lowry 32F.3d 1579, 1583-84 (Fed. Cir. 1994). See also MPEP 2106.) Indeed, independent claims 40 and 47 recite, respectively, a computer-implemented method and a software product comprising instructions to cause data processing apparatus to perform operations. Thus, the claims require that the hierarchical data structure be configured to be processed by a machine. Accordingly, the relevant question for the patentability of the claims is whether Graves discloses the data structure that is organized for machine processing in the particular hierarchy required by the claimed software product or computer-implemented method.

Graves, however, discloses a series of questions that includes items such as "Overall Feature," "Story Appeal" and "Action Level," but it fails to disclose the claimed hierarchical data structure that is configured to be processed by a data processing apparatus. Indeed, neither FIG. 5 nor the specification of Graves discloses that the "Overall Feature" item and other items, such as "Story Appeal" and "Action Level," in the series of questions are arranged in a hierarchical data structure by structural relations that are configured to be processed by a machine. Instead, the only machine-processable structural relation that Graves discloses between the questions in FIG. 5 is that the questions form a series. But a series is not a hierarchical data structure.

With reference to FIG. 6 of Graves, the Examiner argues that "the 'Overall Feature' [of FIG. 5] ... may be represented by a program name such as 'Jurassic Park', where Figure 6 further discloses the claimed '...including two or more parent preference objects' as met by each of the features listed." Office Action of April 7, 2006, at p. 3.

Graves discloses that FIG. 6 illustrates a program listing on a preview channel. Col. 7:5-20. Because the term "list" refers to an item-by-item series, Graves's FIG. 6 also discloses a series, not a hierarchical data structure as required by the claims.

Furthermore, the Examiner failed to identify in Graves any disclosure to support his apparent assertion that Graves's FIGS. 5 and 6 illustrate different parts of a single

hierarchical data structure. Indeed, Graves fails to disclose that the item "Jurassic Park" in FIG. 6 would correspond to the item "Overall Feature" in FIG. 5, as asserted by the Examiner. Thus, Graves fails to support that the item "Jurassic Park" is a parent preference object even in the Examiner's abstract hierarchy, and Graves definitely fails to disclose the claimed hierarchical data structure.

Neither does Graves disclose the correspondence asserted by the Examiner between the "Preference Grade" for "Jurassic Park" in FIG. 6 and the "Rating Grade" for the "Overall Feature" in FIG. 5. In contrast, Graves discloses that the user interface of FIG. 5 corresponds to "the rating appropriate for the program just watched," and the screen of FIG. 6 can be used to rank programs that have been previously ranked by the screening processor and stored in a preferred viewing file 30a. Col. 6:12-16 and col. 7:1-20. Furthermore, the preference scale in FIG. 6 "ranges from one to the number of programs in file 30a ... [and] if there are only five programs in the file ..., the viewer ranks the displayed programs from one to five." Col. 7:12-17. Thus, the "Preference Grade" for "Jurassic Park" in FIG. 6 depends on the number of pre-selected programs. No such dependence is disclosed for the "Rating Grade" of the "Overall Feature" in FIG. 5. Therefore, Graves fails to support the correspondence asserted by the Examiner between FIGS. 5 and 6, and Graves also fails to disclose that the "Preference Grade" for the "Jurassic Park" in FIG. 6 would correspond to a preference value to characterize user preference for the combination of the content description elements represented by the corresponding plurality of child preference objects.

Thus, the Examiner seems to construct from FIGS. 5 and 6 of Graves an abstract hierarchy for which Graves fails to disclose the necessary relations. In contrast, Graves discloses that FIGS. 5 and 6 illustrate different lists for acquiring "viewer personal preferences." Col. 6:53-59 and col. 7:37-38. Graves, however, fails to disclose that the "viewer personal preferences" of FIGS. 5 and 6 are somehow combined into the claimed hierarchical data structure.

Furthermore, the Examiner argues that "generating a user profile that includes the hierarchical data structure, and specifies the respective preference value for each of the two

or more parent preference objects is met by the user completing the viewer preference data through the feature selections and ratings as shown in Figures 5 and 6 and described above (see col. 6, line 53-col. 8, line 4)." Office Action of April 7, 2006, at p. 5.

Graves discloses that the acquired user preferences are used to update a personal preference file 32a and to teach a neural weighing system to determine a grade for each incoming program. Col. 7:37-54. Graves, however, fails to disclose that either the personal preference file 32a or the neural weighing system includes the claimed hierarchical data structure.

In sum, Graves discloses different series of questions for acquiring user preferences, but fails to disclose the claimed hierarchical data structure.

Claims

Claims 40-53 were pending when last examined. With this Response, claims 40, 41, 43, 47, 48 and 50 have been amended. Claims 54-59 have been added. Support for the amendment can be found at least in FIG. 3 and page 3 of the specification.

Claim Rejections – 35 USC § 102

Claims 40-53 were rejected under 35 U.S.C. 102(b) as being anticipated by Graves. The applicant respectfully traverses the rejections.

Claim 40, as amended, recites storing a multiple level hierarchical data structure for describing user preferences related to multimedia content, the hierarchical data structure including two or more parent preference objects, wherein each of the two or more parent preference objects is a container for a corresponding plurality of child preference objects in the hierarchical data structure, each child preference object representing at least one content description element describing multimedia content.

As discussed above in the Response to Examiner's Arguments, Graves fails to disclose the claimed hierarchical data structure. For example, contrary to the Examiner's assertion, neither Graves's "Overall Feature" nor the program name "Jurassic Park" is a parent preference object that is a container for a corresponding plurality of child preference objects in the hierarchical data structure, as required by the claim. Instead, Graves discloses that the "Overall Feature" and the program name "Jurassic Park" are items in a series, as discussed above in detail. Because Graves fails to disclose at least the above limitations, claim 40 should be allowed. Claims 41-46 depend from claim 40, and are allowable for at least the same reasons.

Claim 47 recites a software product comprising instructions to cause data processing apparatus to perform operations similar to those discussed above with reference to claim 40. Because Graves fails to disclose the above discussed limitations of these operations, claim 47 is allowable. Claims 48-53 depend from claim 47, and are allowable for at least the same reasons.

New Claims

Claims 54-59 have been added by the present amendment. No new matter has been introduced.

Claims 54-57 are dependent claims that are allowable for at least the same reasons as their respective base claims.

Claim 58 recites a computer-implemented method that includes generating a user profile that includes a hierarchical data structure for describing user preferences related to multimedia content. The hierarchical data structure includes a parent preference object and a plurality of child preference objects, wherein the parent preference object is a container for the child preference objects in the hierarchical data structure, and each child preference object represents at least one content description element describing multimedia content. A first preference value is assigned to the parent preference object to characterize user

preference for the combination of the content description elements represented by the plurality of child preference objects, and a respective preference value is assigned to each child preference object to characterize user preference for the content description element represented by that child preference object.

As discussed above, Graves fails to disclose the claimed hierarchical data structure. Thus, claim 58 is allowable. Claim 59 depends from claim 58 and should be allowed for at least the same reason.

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CONCLUSION

Applicants respectfully request that the pending claims be allowed and the case passed to issue. Should the Examiner wish to discuss the Application, it is requested that the Examiner contact the undersigned at (415) 772-7493.

Certificate of Mailing

I hereby certify that this correspondence is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

10/5/06 *Richard A. Past*

Date   Signature

Respectfully submitted,

By: Ferenc Pazmandi
        Agent of Record
    Limited Recognition No. L0078
           FP/rp

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SIDLEY AUSTIN LLP
555 California Street, Suite 2000
San Francisco, CA 94104-1715
(415) 772-1200